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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,115	11/07/2001	Andreas Buos	085874-0381	4653

22428 7590 04/27/2004

FOLEY AND LARDNER
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

DABNEY, PHYLESHA LARVINIA

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 04/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,115

Applicant(s)

BUOS ET AL.

Examiner

Phylesha L Dabney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-16, 18 and 23-27 is/are rejected.
- 7) ☒ Claim(s) 10-12, 17, 19-22 and 28-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the application filed on 22 April 2004 in which claims 1-45 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4, 9, 14-15, 18, and 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Yanagishima (U.S. Patent No. 4,514,599).

Regarding claims 1-4, 9, 14-15, 18, and 23-27, Yanagishima teaches an inertial exciter for an acoustic radiator comprising a massive member (553-555); a coupler (547) for attachment to an acoustic radiator (540); a motor (548, 553-556); and a suspension (550), wherein the suspension acts in a plane *generally* passing through the center of mass of the massive member, thereby reducing any moment acting on the suspension.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 31-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fresard (U.S. Patent No. 4,506,117).

Regarding claims 31-33, and 37-41, Fresard teaches an exciter attached to a base plate (6) in a repeatedly engageable manner (fig. 5). Fresard does not teach the base plate for attachment to an acoustic radiator in a non-repeatedly engageable manner. However, the examiner takes official notice that it is known to non-repeatedly engage a base plate to a radiation by using materials, such as adhesive glue, bonding cements, etc., for securely applying the exciter to a specific location. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a material such as adhesion in the invention of Fresard for firmly securing the exciter at a specific optimal location.

Regarding claims 34 and 43, Fresard teaches the releasable connection is a threaded connection (27).

Regarding claims 35-36, 42, and 44-45, Fresard teaches a locking device (inherently provided reverse threading of the elastomer, 10) for locking the threaded connection.

3. Claims 5-8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagishima (U.S. Patent No. 4,514,599).

Regarding claims 5-8 and 16, Yanagishima does not teach the specifics of the suspension as being a spider formed from a corrugated foil of metal, polymer, or strengthened cloth. However, the examiner takes official notice that it is known in the art to make the suspension of materials such as thin metal plates, rubber or polymer, strengthened cloth, and cantilever type for achieving the desired elasticity and support. Therefore, it would have been obvious to one of

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ordinary skill in the art at the time the invention was made to make the suspension of any material such as metal, polymer or strengthened cloth for achieving the desired elasticity and strength.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagishima (U.S. Patent No. 4,514,599) in view of Van Urk (U.S. Patent No. 2,698,917).

Regarding claim 13, Yanagishima teaches the magnet assembly comprising a magnet sandwiched between a magnet cup and a pole piece, the cup defining a magnet gap, which is filled with retentive fluid of suitable viscosity to damp motion of the voice coil. Van Urk teaches the desirability of a magnet assembly (fig. 2) comprising a magnet (1) sandwiched between a magnet cup (4) and a pole piece (5), the cup defining a magnet gap (8) for minimizing stray fields. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cup-like magnetic assembly in the invention of Yanagishima, as taught by Van Urk, for minimizing stray fields. Furthermore, the combination of Yanagishima and Van Urk does not teach filling the magnetic gap with retentive fluid. However, the examiner takes official notice that it is known in the art to fill the magnetic gap with retentive fluid of suitable viscosity to damp motion of the voice coil and removing heat. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include retentive fluid in the magnet gap of the combination of Yanagishima and Van Urk for the reasons stated above.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

With respect to the applicant's arguments that the Yanagishima reference does not teach an inertial exciter since the driver assembly is fixed to the bottom of a driver housing, the examiner's disagrees. The applicant states that an inertial exciter is a device, which included a magnetic assembly and a voice coil assembly (page 8, paragraph 0036). The Yanagishima reference clearly teaches a device in figures 8-10 which includes these components as clearly outlined in the claims above.

With respect to the applicant's arguments that the Yanagishima reference does not teach the "suspension acts in a plane that generally pass through the center of mass," the examiner disagrees. The applicant states that the suspension generally pass through the center and since the center of mass measurement is determined by the weight of the massive member portions, then this plane orientation does not exclude any particular location of the suspension relative to the massive member. Therefore, the examiner feels that the Yanagishima reference satisfies the claimed limitations.

With respect to the applicant's argument that the Fresard reference does not satisfy the "repeatedly engageable limitations of claims 31-35, the examiner disagrees. Fresard teaches adjusting screws (27) that would allow the magnetic assembly to be engaged with the base plate 6 or removed therefrom (figures. 4-5). Fresard also teaches an elastomer ring (10'), which provides resiliency between the rigid parts; however, he does not teach that the elastomer provided any adhesion in the event that the screws are removed, thus one cannot assume that this

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adhesive property exists. However, it is known that an elastomer will act as a resiliency/elasticity and can be presumed to have this property.

Allowable Subject Matter

Claims 10-12, 17, 19-22, 28-30, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phylesha L Dabney whose telephone number is 703-306-5415. The examiner can normally be reached on Mondays, Tuesdays, Thursdays, Fridays 8:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9314, for formal communications intended for entry and for informal or draft communications, please label "Proposed" or "Draft" when submitting an informal amendment.

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(703) 306-0377, for customer service questions.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor
(Receptionist).

PLD

April 22, 2004


CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600